# SK2302AAT

SOT-523 Plastic-Encapsulate MOSFETS

FEATURE

• TrenchFET Power MOSFET

APPLICATIONS

• Load Switch for Portable Devices
• DC/DC Converter
• **MARKING: 2302**

SOT - 523

1. GATE   2. SOURCE   3. DRAIN
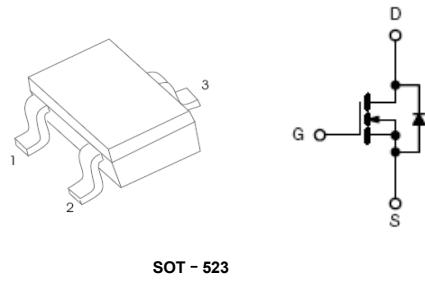
Maximum ratings (T$_a$=25℃ unless otherwise noted)

| Parameter	Symbol	Value	Unit
Drain-Source Voltage	V$_{DS}$	20	V
Gate-Source Voltage	V$_{GS}$	±8	
Continuous Drain Current	I$_D$	2.1	A
Continuous Source-Drain Current(Diode Conduction)	I$_S$	0.6	
Power Dissipation	P$_D$	0.35	W
Thermal Resistance from Junction to Ambient (t≤5s)	R$_{θJA}$	357	℃/W
Operating Junction	T$_J$	150	℃
Storage Temperature	T$_{STG}$	-55 ~+150	

Electrical characteristics (T$_a$=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static						
Drain-source breakdown voltage	V$_{(BR)DSS}$	V$_{GS}$ = 0V, I$_D$ =10μA	20			V
Gate-threshold voltage	V$_{GS(th)}$	V$_{DS}$ =V$_{GS}$, I$_D$ =50μA	0.65	0.95	1.2	
Gate-body leakage	I$_{GSS}$	V$_{DS}$ =0V, V$_{GS}$ =±8V			±100	nA
Zero gate voltage drain current	I$_{DSS}$	V$_{DS}$ =20V, V$_{GS}$ =0V			1	μA
Drain-source on-resistance[a]	r$_{DS(on)}$	V$_{GS}$ =4.5V, I$_D$ =2.0A		0.045	0.060	Ω
		V$_{GS}$ =2.5V, I$_D$ =1.0A		0.070	0.115	
Forward transconductance[a]	g$_{fs}$	V$_{DS}$ =5V, I$_D$ =2.0A		8		S
Diode forward voltage	V$_{SD}$	I$_S$=0.94A,V$_{GS}$=0V		0.76	1.2	V

**Notes :**

a. Pulse Test : Pulse width≤300μs, duty cycle ≤2%.

b. These parameters have no way to verify.

Typical Characteristics

Output Characteristics
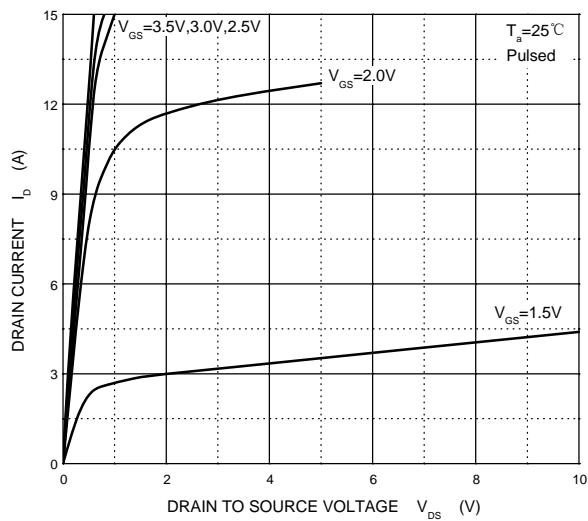
Transfer Characteristics
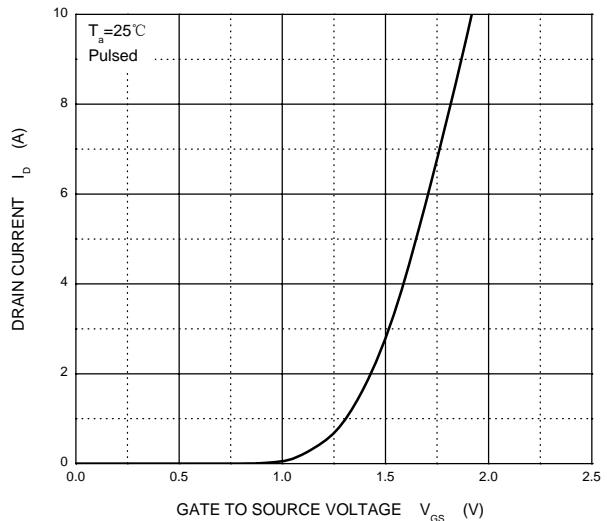
$R_{DS(ON)}$ —— I_D
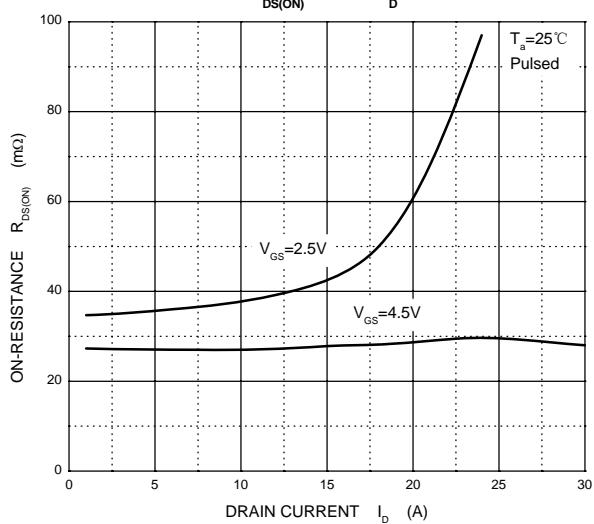
$R_{DS(ON)}$ —— V_{GS}
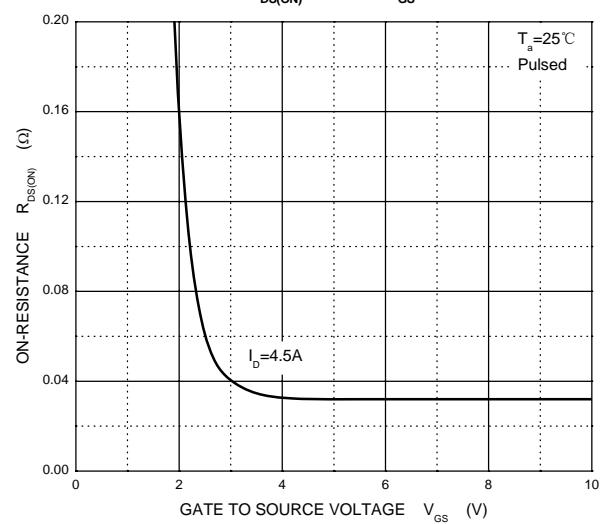
SOT-523 PACKAGE OUTLINE DIMENSIONS
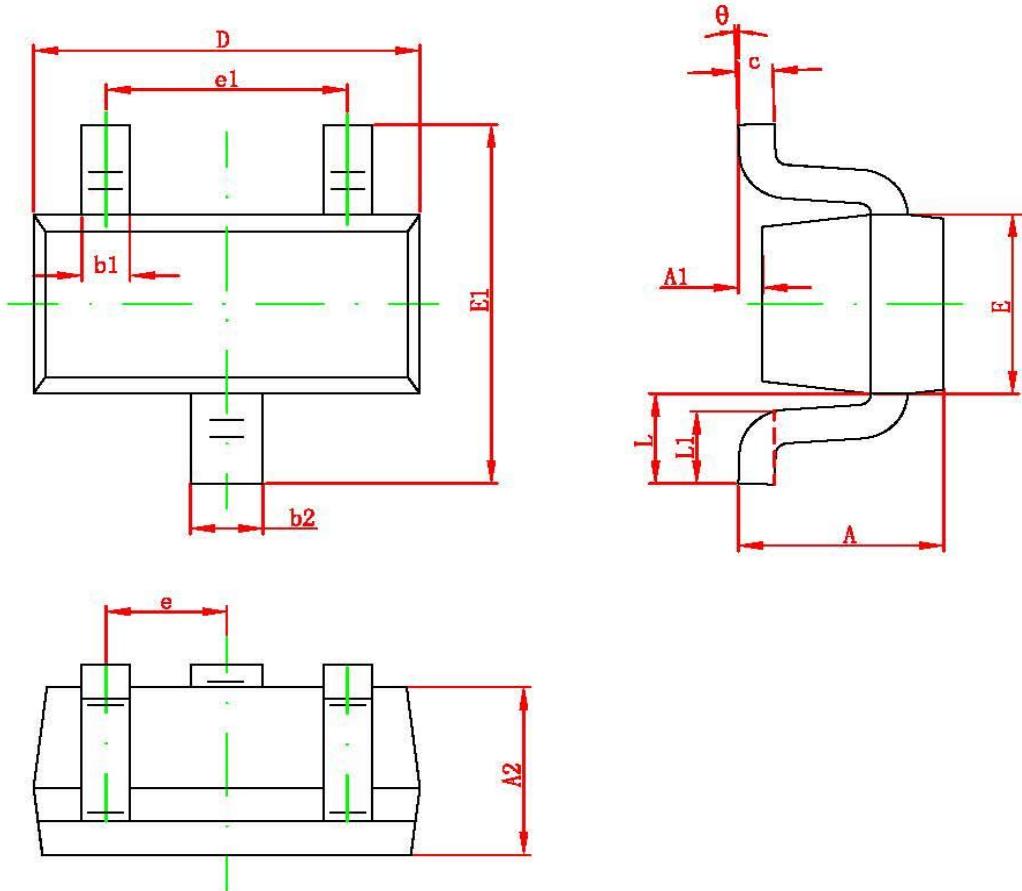
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°